



Chesapeake Bay Program
SCIENTIFIC AND TECHNICAL ADVISORY COMMITTEE
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August 4, 2017

RE: STAC Review of Revised James River Chlorophyll-*a* Criteria and Assessment

Nicholas DiPasquale, Chair, Chesapeake Bay Program Management Board
U.S. Environmental Protection Agency
410 Severn Avenue, Suite 109
Annapolis, MD 21403

Cc: Management Board; Scientific Technical Assessment and Reporting (STAR); Criteria Assessment Procedures Workgroup; Water Quality Goal Implementation Team

Dear Director DiPasquale,

I am pleased to attach for your consideration the STAC review report: *Scientific and Technical Advisory Committee Peer Review of Revised James River Chlorophyll-*a* Criteria and Assessment*.

This peer review panel was originally convened by the Chesapeake Bay Program's Scientific and Technical Advisory Committee (STAC) in fall of 2016 to provide an independent scientific review of two primary reports developed by the Virginia Department of Environmental Quality (VA DEQ). These two documents 1) outlined existing numeric chlorophyll-*a* criteria in the tidal portion of the James River, and 2) described a new proposed assessment methodology that the state of Virginia could use to evaluate attainment of these criteria, and determine if they are protective of designated uses. This review was previously approved by STAC and published (Harris et al. 2016). In response to that STAC review, the VADEQ engaged in new analyses and developed a revised approach which they documented in two completely new documents that are the subject of this second, subsequent effort. The attached report, therefore, summarizes the panel's findings and recommendations of this second review.

The body of this report is organized by each of three charge questions, and near-term and long-term recommendations are described. Specific comments were once again made on the content, organization, and structure of the new 2017 documentation. The recommendations identified by the review team can be summarized broadly below:

- Consider engaging in the assessment methodology and criteria derivation as a complementary effort. Specifically, the assessment methodology should be developed first, and then used in a separate analysis to determine the chosen approach for data aggregation and calculation of criteria values.
- A comparative analysis of the existing assessment methodology with the new assessment methodology is warranted.

- Consider separating policy discussions in the documentation in a section distinct from the analytical work and statistical analyses, rather than the current approach that co-mingles the two. Ideally, the degree of harmful effects should be assessed first, to be used in a policy discussion regarding acceptable risk before assigning the criteria.
- Refine and clarify the rationale behind the interpolation and aggregation methodologies used with the available data and consider specific statistical insights provided in detail with this second report.

While the panel strongly feels the above concerns need to be addressed, reviewers were in agreement that this new effort from VADEQ is on a path that will lead to scientifically defensible criteria and assessment methods for the James River.

We hope the Management Board, Goal Implementation Teams, and various workgroups find the recommendations outlined in this review report to be useful, and we look forward to your feedback. STAC respectfully requests a written response from the Criteria Assessment Procedures Workgroup by November 4, 2017.

Please direct any questions you may have about this report and its recommendations to Rachel Dixon, Coordinator of the Chesapeake Bay Program's Scientific and Technical Advisory Committee, and Lora Harris (University of Maryland Center for Environmental Science – Chesapeake Biological Laboratory), chair of the review panel.

On behalf of the entire STAC, thank you again for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lisa Wainger', with a long horizontal flourish extending to the right.

Lisa Wainger
Chair, Chesapeake Bay Program's Scientific and Technical Advisory Committee